

EXHIBIT B

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

ORACLE CORPORATION, a)
Delaware corporation,)
ORACLE USA, INC., a)
Colorado corporation, and)
ORACLE INTERNATIONAL)
CORPORATION, a California)
corporation,)
Plaintiffs,)
vs.) No. 07-CV-1658 (PJH)
SAP AG, a German)
corporation, SAP AMERICA,)
INC., a Delaware)
corporation, TOMORROWNOW,)
INC., a Texas corporation,)
and DOES 1-50, inclusive,)
Defendants.)

)

VIDEOTAPED DEPOSITION OF

BRUCE SPENCER, PH.D.

FRIDAY, JUNE 4, 2010

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

REPORTED BY: HOLLY THUMAN, CSR No. 6834, RMR, CRR
(1-427339)

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09:27:59	09:30:38
09:28:01	09:30:41
09:28:08	09:30:42
09:28:10	09:30:43
09:28:12 8 THE WITNESS: Well, the way it affects --	09:30:44
09:28:22 9 the way this point that we've been discussing	09:30:46
09:28:25 10 affects my conclusions is that in statistics, there	09:30:47
09:28:29 11 are established methods and procedures that have	09:30:48
09:28:32 12 been studied and researched, and statisticians try	09:30:50
09:28:35 13 to use the methods that are better.	09:30:51
09:28:42 14 So part of it is a criticism of method.	09:30:53
09:28:43 15 And then in terms of the lower bound changing, my	09:30:55
09:28:51 16 concern would be that it's plausible to me that	09:30:56
09:29:00 17 this is a case where damages are involved, and it's	09:30:59
09:29:04 18 plausible to me that the statistics will be used in	09:31:01
09:29:08 19 some way that -- or another to make inferences	09:31:02
09:29:13 20 about the levels of damages.	09:31:05
09:29:15 21 And in that case, the lower bounds could	09:31:07
09:29:20 22 affect money.	09:31:09
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10:07:50		10:10:37
10:07:54 2	THE WITNESS: Well, if we had estimates of	10:10:38
10:07:56 3	measurement error, it would be quantifiable.	10:10:42
10:07:58 4	MR. PICKETT: Q. But you don't?	10:10:57
10:08:00 5	A. Not at this time, I don't.	10:11:00
10:08:02		10:11:05
10:08:04		10:11:08
10:08:09		10:11:11
10:08:10		10:11:16
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10:08:14		10:11:22
10:08:17		10:11:34
10:08:20 14	Q. Have you concluded that any measurement	10:11:35
10:08:23 15	errors in fact occur?	10:11:38
10:08:25 16	MR. WILKES: Objection. Form.	10:11:42
10:08:29 17	THE WITNESS: I've concluded that	10:11:44
10:08:30 18	measurement errors have the potential to have	10:11:48
10:08:33 19	occurred.	10:11:53
10:08:34 20	MR. PICKETT: Q. So the answer to my	10:11:55
10:08:35 21	question is, no, Mr. Pickett, I have not concluded	10:11:58
10:08:38 22	that any specific measurement errors in fact occur.	10:11:59
10:08:41 23	Right?	10:12:00
10:08:41 24	MR. WILKES: Objection. Form.	10:12:03
10:08:42 25	Argumentative, harassing, asked and answered.	10:12:06
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10:08:54 1	THE WITNESS: I don't have an opinion	10:12:12
10:08:58 2	about the magnitude of measurement error.	10:12:14
10:09:01 3	MR. PICKETT: Q. Or even the existence of	10:12:16
10:09:02 4	a single one. Correct?	10:12:23
10:09:04 5	MR. WILKES: Objection. Form.	10:12:26
10:09:14 6	THE WITNESS: I don't have evidence of a	10:12:27
10:09:16 7	measurement error that has occurred.	10:12:30
10:09:19		10:12:33
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10:21:41	10:25:19
10:21:42	10:25:25
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10:21:47	10:25:33 21 MR. PICKETT: Q. So this particular
10:21:51	10:25:34 22 criticism had no impact on the results. Correct?
10:21:55	10:25:37 23 MR. WILKES: Objection. Form.
10:21:57	10:25:43 24 THE WITNESS: Not as calculated by
10:21:58	10:25:44 25 Dr. Levy, that's correct.

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11:07:25	11:10:53
11:07:28	11:10:59
11:07:30	11:11:05
11:07:34	11:11:07 19 Q. Do you have any information at all with
11:07:37	11:11:11 20 respect to how the summary statistics from
11:07:43	11:11:18 21 Dr. Levy's report translate into damages
11:07:47	11:11:21 22 calculations or other kinds of arguments in the
11:07:51	11:11:24 23 case?
11:08:00	11:11:26 24 A. I have nothing explicit or concrete in the
11:08:05	11:11:29 25 way of understanding.

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11:12:25	11:15:12
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11:12:35	11:15:25 19 Q. So the higher the dollars at stake in the
11:12:35	11:15:29 20 lawsuit, the higher the level of precision in the
11:12:37	11:15:33 21 statistical analysis should be?
11:12:39	11:15:35 22 A. In general, yes.
11:12:45	11:15:36
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11:13:59	11:16:18
11:14:01	11:16:19 18 Q. So there's a lot of money at stake.
11:14:05	11:16:21 19 A. There's a lot of money at stake.
11:14:08	11:16:23 20 Q. And that could justify foregoing sampling
11:14:10	11:16:26 21 altogether?
11:14:14	11:16:29 22 A. It depends on how the -- Dr. Levy's
11:14:14	11:16:31 23 numbers get used.
11:14:16	11:16:32 24 Q. Which you don't know?
11:14:18	11:16:33 25 A. Which I don't know.

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11:23:57	11:27:02
11:23:59	11:27:06
11:24:04	11:27:13
11:24:08	11:27:16
11:24:09	11:27:17 18 Q. What did you mean when you said, "This is
11:24:11	11:27:19 19 quite a large range of uncertainty to deliberately
11:24:12	11:27:21 20 aim for in a case where Plaintiffs' allegations
11:24:14	11:27:25 21 place large sums of money at stake"?
11:24:16	11:27:27 22 A. Right. So I'm making an implicit
11:24:20	11:27:31 23 assumption that there's some link that I don't know
11:24:22	11:27:36 24 about, but that there exists one between the
11:24:24	11:27:41 25 statistics computed by Dr. Levy and damages claims.

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11:28:02	11:30:08
11:28:03 6 Q. Well, it could or it could not. You don't	11:30:09
11:28:06 7 know one way or the other.	11:30:12
11:28:08 8 A. I don't know what the links are between	11:30:12
11:28:12 9 Dr. Levy's statistics and any damages claims.	11:30:14
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11:28:25	11:30:20
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11:28:32	11:30:26
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11:28:45	11:30:38
11:28:49	11:30:42
11:28:50	11:30:45
11:28:52	11:30:46
11:28:55 22 A. What I know about this case is, I was	11:30:47
11:28:57 23 asked to review and evaluate Dr. Levy's report and	11:30:51
11:29:02 24 his work, and that's what I know about. And I'm	11:30:53
11:29:08 25 pretty myopic about the rest of the case. So --	11:30:56
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11:29:17	11:31:02
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11:29:21 6 MR. PICKETT: Q. Do you understand that	11:31:09
11:29:22 7 there is a burden of proof in the trial?	11:31:12
11:29:27 8 MR. WILKES: Objection. Form.	11:31:14
11:29:29 9 THE WITNESS: I would expect that there	11:31:16
11:29:30 10 is, yes.	11:31:18
11:29:31 11 MR. PICKETT: Q. Do you know what that	11:31:20
11:29:32 12 burden of proof is?	11:31:20
11:29:34 13 MR. WILKES: Objection. Form.	11:31:22
11:29:35 14 THE WITNESS: Not exactly.	11:31:24
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12:31:47		12:35:07	
12:31:47		12:35:11	
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12:31:51	15	Q. But are you of the opinion that sampling	12:35:20
12:31:53	16	with replacement is not sufficiently precise for	12:35:25
12:31:56	17	the purpose at hand?	12:35:27
12:32:03	18	MR. WILKES: Objection. Form.	12:35:30
12:32:05	19	THE WITNESS: I don't know how the	12:35:32
12:32:07	20	statistics are going to be used, and so that's why	12:35:35
12:32:10	21	I can't answer that question. I don't have an	12:35:38
12:32:12	22	opinion on that.	12:35:44
12:32:13	23	MR. PICKETT: Q. So it may make no	12:35:49
12:32:15	24	difference whatever whether sampling with	12:35:51
12:32:17	25	replacement or sampling without replacement is	12:35:53
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12:32:19	1	used?	12:35:56
12:32:20	2	MR. WILKES: Objection. Form.	12:35:58
12:32:21	3	THE WITNESS: Could be.	12:36:02
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12:53:42	2	Dr. Vandaele chose his seed?
12:53:45	3	A. No, I don't.
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Page 150	Page 152
14:00:31	14:02:41
14:00:31 2 Q. Based on the discrepancy analysis, you	14:02:43
14:00:33 3 don't know whether Dr. Levy's random set of numbers	14:02:54
14:00:37 4 are random or not?	14:02:56
14:00:39 5 MR. WILKES: Objection. Form.	14:03:02
14:00:40 6 Argumentative, asked and answered.	14:03:03
14:00:41 7 THE WITNESS: The discrepancy analysis by	14:03:06
14:00:42 8 itself does not prove with absolute certainty that	14:03:11
14:00:51 9 Dr. Levy's sample was selected in a manner other	14:03:12
14:00:55 10 than how he claims.	14:03:13
14:00:57	14:03:14
14:00:58	14:03:17
14:01:02	14:03:20
14:01:05	14:03:26
14:01:07	14:03:28
14:01:09	14:03:32
14:01:13	14:03:36
14:01:13	14:03:37 18 Q. Is your z statistic analysis a hypothesis
14:01:15	test?
14:01:16	14:03:43 19 A. I haven't set it up that way.
14:01:16	14:03:48 20 Q. Well, isn't the hypothesis you're testing
14:01:17	that Dr. Levy did not perform a random sampling of
14:01:18	the Critical Support population?
14:01:18	14:03:56 22 A. I just said I didn't set it up as a
14:01:19	hypothesis test.
Page 151	
14:01:24	14:04:06 1 Q. Isn't that your hypothesis that you're
14:01:28	trying to test, whether you set it up that way or
14:01:29	not? Isn't that what you did?
14:01:30	14:04:12 4 MR. WILKES: Objection. Form.
14:01:32	14:04:14 5 THE WITNESS: I'm not doing a formal
14:01:33	hypothesis test in this analysis.
14:01:39	14:04:16 6
14:01:42	14:04:18
14:01:45	14:04:19
14:01:51	14:04:19
14:01:52	14:04:21
14:01:53 12 MR. PICKETT: Q. On the basis of the	14:04:25
14:01:54 13 discrepancy of 8 you find for Mr. Levy's sample,	14:04:27
14:01:57 14 you cannot say on that basis alone that his sample	14:04:29
14:02:00 15 is not random?	14:04:31
14:02:02 16 MR. WILKES: Objection. Form.	14:04:33
14:02:04 17 THE WITNESS: On the basis of that alone,	14:04:34
14:02:07 18 I do not say that his sample is not random.	14:04:34
14:02:15	14:04:36
14:02:17	14:04:39
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15:14:04	15:16:49
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15:14:24	15:16:59
15:14:26	15:17:01
15:14:27	15:17:02
Page 199	Page 201
15:14:29	15:17:04
15:14:30 2	Q. Does it impact the confidence interval for
15:14:33 3	the sampled measures?
15:14:36 4	A. The underlying skewness, I believe, will
15:14:40 5	affect the coverage properties of the confidence
15:14:43 6	intervals for the sampled measures, yes.
15:14:46 7	Q. How?
15:14:49 8	A. When you have large skewness, it appears
15:14:53 9	that the coverage will tend to be lower than the
15:14:58 10	advertised rate.
15:14:59 11	Q. Large skewness in the fully enumerated
15:15:02 12	samples?
15:15:03 13	MR. WILKES: Objection. Form. Vague and
15:15:04 14	ambiguous, asked and answered --
15:15:06 15	MR. PICKETT: Q. What did you mean when
15:15:07 16	you said, when you tend to have -- I'm sorry, when
15:15:09 17	you have large skewness? Did you mean large
15:15:12 18	skewness in the fully enumerated samples?
15:15:15 19	A. I -- I meant large skewness with the
15:15:21 20	variable for which you're calculating a confidence
15:15:24 21	interval, whether it's fully enumerated or sampled.
15:15:31 22	Q. How does skewness in one measure affect
15:15:33 23	the confidence interval of another measure?
15:15:39 24	A. Directly, it does not.
15:15:41	15:17:56

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15:34:41	15:37:02
15:34:42	15:37:04
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15:35:44	15:48:32
15:35:47	15:48:35
15:35:49	15:48:40
15:35:50	15:48:43
15:35:52	15:48:47
15:35:56	15:48:50
15:35:57	15:48:54
15:36:01 21	THE WITNESS: The analysis I just
15:36:02 22	described is one that I did not even write down.
15:36:07 23	It was one that I have looked at the tables, saw
15:36:11 24	the underestimation, and thought that it could also
15:36:16 25	apply to the sampled measures.

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15:57:47	16:00:37
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15:58:55	16:01:46
15:59:00	16:01:47
15:59:03	16:01:50
15:59:06 4	Well first of all, what is an implicit
15:59:07 5	calculation?
15:59:08 6	A. An implicit calculation is, I look at some
15:59:11 7	numbers and get a sense and do a calculation in my
15:59:16 8	head and say it's about such-and-such.
15:59:18	16:02:33
15:59:21	16:02:36
15:59:27	16:02:41
15:59:29	16:02:48
15:59:36	16:02:53
15:59:41	16:03:00
15:59:47	16:03:05
15:59:51	16:03:10
15:59:52	16:03:12
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16:37:33	16:39:47
16:37:37	16:39:49
16:37:41	16:39:54
16:37:45	16:39:56
16:37:52	16:40:00
16:37:54	16:40:03
16:37:58	16:40:05
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16:38:00	16:40:19
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16:38:06	16:40:29
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16:38:31	16:40:54
16:38:33	16:40:57
16:38:34	16:41:05
16:38:35	16:41:06 4
16:38:36	MR. PICKETT: Q. Okay. Let me ask you
16:38:44	this more simply: What is the probability of A or
16:38:44	16:41:07 5 B occurring if the probability of A is 10 percent
16:38:44	16:41:10 6 and the probability of B is 10 percent?
16:38:48	16:41:13 7
16:38:51	MR. WILKES: Objection. Form. Incomplete
16:38:53	16:41:15 8 hypothetical, calls for speculation, vague and
16:38:54	16:41:17 9 ambiguous.
16:38:55	16:41:22 11 THE WITNESS: Well, it's the sum of the
16:38:57	16:41:23 12 probabilities minus the probability of the joint
16:39:00	16:41:26 13 event. So it would be -- if my mental arithmetic
16:39:00	16:41:30 14 is right, it would be 19 percent.
16:39:02	16:41:59
16:39:03	16:42:00
16:39:04	16:42:10
16:39:08	16:42:14
16:39:10	16:42:17
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16:55:30	16:59:55 1 MR. WILKES: Same objection.
16:55:32	16:59:57 2 THE WITNESS: My inclination is borne of
16:55:56	17:00:00 3 my experience as a practicing statistician.
16:56:30	17:00:05
16:56:31	17:00:07
16:56:32	17:00:10
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16:59:01	17:01:47
16:59:06	17:01:51
16:59:09	17:01:53
16:59:11	17:02:00
16:59:18	17:02:02 14 MR. PICKETT: Q. Based on what you know,
16:59:19	17:02:04 15 are you able to say whether or not his precision
16:59:23	17:02:08 16 ranges are precise enough?
16:59:25	17:02:11 17 MR. WILKES: Same objection.
16:59:29	17:02:12 18 MR. PICKETT: Q. For the purposes of this
16:59:30	17:02:13 19 case?
16:59:34	17:02:13 20 MR. WILKES: Same objections.
16:59:37	17:02:18 21 THE WITNESS: Without knowing the purposes
16:59:42	17:02:19 22 of the case or having seen how the numbers are
16:59:44 23	17:02:22 23 going to be used, I can't answer your question and
16:59:52 24	17:02:25 24 say I know, no. So the answer is, I don't know.
16:59:54 25	17:02:34 25 At this point.

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17:02:41	1	If I had more information about the use, I
17:02:43	2	might be able to answer.
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17:02:47		17:06:32
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17:09:47		17:13:49
17:09:54		17:13:51
17:09:57		17:13:51
17:10:02		17:13:53
17:10:06 13	Q. Let me ask you, please, to turn to	17:13:55
17:10:08 14	paragraph 8.1 of your report, on page 42.	17:13:58
17:10:44 15	On page 43, continuing on with paragraph	17:14:02
17:10:49 16	8.1, you state that some of Dr. Levy's statements	17:14:06
17:11:07 17	are, quote, "misleading statements about	17:14:09
17:11:10 18	percentages." Do you see that?	17:14:14
17:11:16 19	A. I see that.	17:14:18
17:11:16 20	Q. What did you mean by that?	17:14:21
17:11:21 21	A. What I meant was that Dr. Levy is offering	17:14:23
17:11:25 22	his percentages as unconditional truth, while he's	17:14:28
17:11:31 23	ignoring sampling error and any even potential for	17:14:31
17:11:35 24	measurement error by Mandiant. He's just offering	17:14:35
17:11:38 25	them as, this is what the actual true percentages	17:14:36
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17:11:42 1	are.	17:14:39
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17:53:15	17:56:33 18 Q. Is it too low?
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17:56:52		17:58:46
17:56:54		17:58:47
17:56:54 10	A. I don't know what purposes we're talking	17:58:50
17:56:56 11	about. For some purposes it would be too low, and	17:58:54
17:56:58 12	for other purposes it might not matter. It's	17:58:55
17:57:00 13	context-dependent. Can't say that it's too low for	17:58:55
17:57:04 14	all purposes.	17:59:00
17:57:06 15	Q. Well, is it too low for purposes of this	17:59:04
17:57:08 16	case? Do you know?	17:59:09
17:57:09 17	MR. WILKES: Objection --	17:59:10
17:57:09 18	THE WITNESS: I don't know all the	17:59:12
17:57:10 19	purposes to which this is going to be used in this	17:59:13
17:57:12 20	case.	17:59:14
17:57:13 21	MR. PICKETT: Q. Do you know any of the	17:59:16
17:57:14 22	purposes?	17:59:17
17:57:14 23	MR. WILKES: Objection. Form.	17:59:17
17:57:16 24	THE WITNESS: Not as I sit here, no.	17:59:19
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17:57:59		18:00:00
17:58:07		18:00:00
17:58:09		18:00:01
17:58:14		18:00:03
17:58:18		18:00:06
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18:02:29	18:05:10
18:02:30	18:05:13
18:02:31	18:05:17
18:02:35	18:05:19
18:02:40	18:05:21 24 Q. Why did you ask to have fewer samples done
18:02:43	18:05:23 25 in the bootstrap?

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18:05:24	1 A. Because the computations were taking too	18:08:26
18:05:27	2 long, and we wanted to get you the results before	18:08:28
18:05:31	3 my deposition.	18:08:31
18:05:33	4 Q. So you did it to reduce the time and	18:08:35
18:05:36	5 effort that was put into the exercise?	18:08:38
18:05:38	6 A. Yes. We were under a significant time	18:08:41
18:05:41	7 constraint.	18:08:43
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18:05:45		18:08:46
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1 CERTIFICATE OF REPORTER

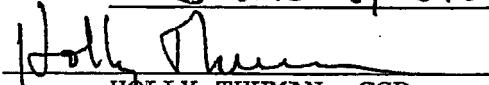
2 I, HOLLY THUMAN, a Certified Shorthand
3 Reporter, hereby certify that the witness in the
4 foregoing deposition was by me duly sworn to tell
5 the truth, the whole truth, and nothing but the
6 truth in the within-entitled cause;

7 That said deposition was taken down in
8 shorthand by me, a disinterested person, at the time
9 and place therein state, and that the testimony of
10 said witness was thereafter reduced to typewriting,
11 by computer, under my direction and supervision;

12 That before completion of the deposition review
13 of the transcript [X] was [] was not requested. If
14 requested, any changes made by the deponent (and
15 provided to the reporter) during the period allowed
16 are appended hereto.

17 I further certify that I am not of counsel or
18 attorney for either or any of the parties to the
19 said deposition, nor in any way interested in the
20 event of this cause, and that I am not related to
21 any of the parties thereto.

22
23 DATED: June 8, 2010

24 
25 HOLLY THUMAN, CSR